

## **ABSTRACT**

A method for manufacturing a contact plug of a semiconductor device is disclosed. A CMP process is performed on an interlayer insulating film and a polysilicon layer using a disclosed acidic CMP slurry containing an oxidizer, thereby  
5 minimizing dishing phenomenon of the interlayer insulating film and the polysilicon layer. Accordingly, the degradation of characteristics of a device can be prevented, which results in improvement of characteristics and reliability of a semiconductor device to manufacture a highly integrated semiconductor device.